The Soviet Merchant Marine

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U.S. DEPARTMENT OF COMMERCE
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FOREWORD

In less than a decade the Union of Soviet Socialist Republics has become a major maritime power. Its ships incorporate many of the latest engineering innovations, and advanced research and development is being undertaken on a continuing basis in all aspects of ship design and propulsion.

Modern, efficient merchant ships are entering the Soviet merchant marine at the rate of about one million deadweight tons a year. Soviet flag ships are to be found serving most of the major ports of the world with few exceptions, notably those of the United States. Apparently every effort is being made by the U.S.S.R. shipping authorities not only to increase the size of the merchant marine but the scope and extent of Soviet shipping activities. Recently, some of their shipping lines, such as the Baltic Steamship Line, have become members of shipping conferences and participants in pooling agreements with non-socialist countries' shipping lines. Soviet flag freighters and passenger ships are even being offered on the time charter market and others are actively seeking cargoes for interport movement outside the sphere of the Soviet bloc.

It is understandable, therefore, that the tremendous upsurge in Soviet ship construction and shipping activities has led to much comment in international shipping circles as to the extent of Soviet shipping capabilities in the foreseeable future and the probable impact of Soviet competition upon the traditional suppliers of merchant shipping.

While not minimizing the remarkable progress of the USSR in acquiring a merchant shipping capability, this report places the recent Soviet acquisition of ships in proper perspective as related to the world fleet and world shipping capability.

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Acting Maritime Administrator

1967

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THE SOVIET MERCHANT MARINE

INTRODUCTION

Soviet merchant sea power is an accomplished fact. Its merchant marine ranks seventh on a deadweight tonnage basis among maritime nations and consists of an increasing number of well-designed, technically advanced, fast oceangoing freighters, bulk carriers, tankers and passenger ships. It is a relatively new fleet since 50 percent of its merchant type oceangoing ships[1] *is five years old or younger* (Table 4), and it has been expanding at an average annual *net* rate of almost one million deadweight tons during the past five years. Based upon the tonnage of ships on order and under construction, scrapping rates, losses, and the goals established by the U.S.S.R. for the next five years, the same rate of growth should be maintained through 1970.

The U.S.S.R. regards its merchant marine as an essential element of the national economy[2] and, according to the latest edition of Jane's Fighting Ships, a vital factor in the national defense. As a consequence, the nation has a strong merchant marine policy and program that appear to be constantly updated.

The Soviet merchant marine is a planned fleet. Ships are added to the fleet on the basis of the nation's planned needs for freighters, bulk carriers, tankers and other types in keeping with the goals established for increased national industrial, agricultural and petroleum production, expansion of economic and commercial ties with its Council for Economic Mutual Assistance (Comecon) trading partners and the developing nations as well as the industrially advanced nations of the West. Its ships now carry all its seagoing domestic trade and some 50 percent of the 92 million tons of oceanborne foreign trade.[3] By 1970, the U.S.S.R. expects its ocean freight turnover to increase by 1.8 times from 208.8 billion ton miles in 1965 to

[1] Based on gross tonnage. Only oceangoing ships of 1,000 gross tons and over are included in this study. Fishing vessels, fish factory ships, self-propelled barges, tugs, icebreakers, cable ships, and military craft are not considered to be merchant type ships in the context of this report.

[2] V. G. Bakayev. Izvestiya, Moscow, October 10, 1965.

[3] Tass international service, Moscow, March 25, 1965.

380 billion ton miles,[4] and it is estimated that its ships will carry a substantially higher share of Soviet foreign trade than the present 50 percent.

From the point of view of national defense, the Soviet merchant marine is readily adaptable as an important arm of the Navy. It has a large number of timber carriers, for example, that can readily be converted to missile carriers and its new passenger ships are readily convertible to troop transports. Although its large, modern fishing fleet is not considered as part of the merchant marine in the context of this study, it can serve as an important defense adjunct by becoming a fleet of minesweepers,[5] and does serve as observation posts for the U.S.S.R. just outside the territorial waters of many non-Communist nations.

There can be no doubt that economic and political exigencies are motivating factors in the expansion of Soviet maritime interests with the Comecon countries and the rest of the world.

Coincident with the growth of Soviet shipping is the realization on the part of the U.S.S.R. that new ideas of management and planning in the operation of its ships are essential if Soviet shipping is to achieve economic progress and engage competitively with the ships of the larger maritime nations. If the tight hold of central planning for Soviet shipping has not been entirely loosened, there seem to be at least the first tentative steps toward actual decentralization of fleets and the need for certain "capitalistic" criteria in the individual operations of the basin fleets.[6]

For example, V.G. Bakayev, who directs Soviet shipping as Minister of the Merchant Fleet and is a member of the powerful Council of Ministers, pointed out the necessity for following basic management principles and what can only be termed the

[4] Izvestiya, Moscow, April 20, 1966, reporting an interview with V. G. Bakayev, Minister of the Merchant Fleet.

[5] New York Herald Tribune, February 6, 1966.

[6] The Soviet merchant marine is divided geographically among five separate "maritime basins": The Arctic, Baltic, Black Sea (including the Sea of Azov), Caspian and Far East. Individual shipping lines operate to various ports of the world from each basin. In addition to the normal functions of trasporting cargo, each steamship line has complete responsibility in its area for the operation of repair yards, port facilities, including loading and discharging and terminal operations, maintenance of tug and lighter service, navigational aids, operations of international training schools for seagoing and related personnel, and a varying degree of responsibility for the housing and social activities of its workers.

first steps of elementary principles of cost effectiveness when he stated:

> ". . . Our shipping is planned to obtain maximum possible income. Our merchant marine has moved from inefficient planning of international service in tons and ton miles to *net profit planning*.[7] Through calculations of net profits we establish plan tasks for our vessels . . .[8]

Much attention is also being given to improved techniques in ship repairing and refitting which would speed up these operations and lengthen the periods between the repairs.

The fact that the Soviet fleet has increased tremendously in size in a relatively short time has been a source of concern to many of the major maritime nations. It *is* a huge state-controlled enterprise, to which substantial allocations of national resources are made not only for ship acquisitions, but for the construction and improvement of ship repair facilities, ports, research and development, and for maritime personnel training facilities.[9] For example, it is planned to increase operational efficiency in shipping operations by 38 percent and in ship repairing by 18 percent during the current five year plan. This is to be done by introducing modern science and technology, fleet specialization, port and shipyard development, and scientific labor organization; increasing incentives; and improving the skills of the workers.[10]

While the U.S.S.R. is still a "user" of shipping services, although not to the same extent as the United States, it is understandable why some of the "supplier" nations are uneasy about the long-term trend of Soviet shipping. Certainly, factors that give substance to the future competitive aspects of the Soviet merchant marine are the recent development in chartering some of its ships to Western countries and its advertised intent to increase this operation,[11] especially during the winter and spring seasons when some Soviet shipping lines are relatively inactive; the related practice of using its ships on return voyages to carry cargo between non-Communist ports (interport cargo) at attractive rates so as to earn foreign exchange,

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[7] Emphasis supplied.
[8] Red Star, Moscow, March 13, 1966.
[9] Vodnyy Transport, Moscow, April 26, 1966.
[10] Ibid.
[11] Fairplay Shipping Journal, August 18, 1966—Advertisement of "SovFracht," Soviet chartering organization, offering ships for various kinds of charters.

rather than sail in ballast; and the expectation that by 1970 the availability of Soviet ships for charter will be substantially greater than at present.

On the other hand, consideration should be given to the hard realities of Soviet merchant fleet capabilities, viz.:

1. Although the deadweight tonnage of the Soviet merchant fleet increased from 4.9 million tons to 9.6 million tons or 96 percent between 1960 and 1965, it comprises only 4.4 percent of the merchant fleets of the world. Even if the laid-up merchant ship types in the United States national reserve fleets amounting to 10.2 million deadweight tons are excluded, the percentage is increased to only 4.6 percent.

2. The growth rates of the fleets of other maritime nations cannot be overlooked.[12] In the same period, the Norwegian merchant marine increased from 16.1 million deadweight tons to 23.5 million tons (46 percent). The Japanese fleet, which had to start virtually from scratch after World War II, increased from 9.4 to 16.5 million deadweight tons (76 percent), and the fleet registered under Greek flag rose from 7.3 to 10.4 million deadweight tons (42 percent). Additionally, about 15.5 million deadweight tons[13] of Greek owned or controlled shipping were under Liberian, Panamanian, Lebanese, and other flags of convenience. Of outstanding importance is the tremendous rise in the tonnage of the Liberian fleet which gained 13.5 million deadweight tons (78 percent) during the above period and totaled 31 million deadweight tons at the end of 1965. It is estimated that of the companies which own or control ships registered under Liberian flag 45 percent was controlled by American interests, 35 percent by Greek interests and the remaining 20 percent was divided among French, Italian, Norwegian, British and Hong Kong interests.[14]

This is, however, only part of the over-all picture, for new ships on order or under construction for the above nations, not to mention such other maritime powers as Denmark, France, West Germany, Italy, Netherlands, Sweden, and the United

[12] For example, the Norwegian fleet comprises 11.5 percent of the world fleet; the Japanese 8.1 percent; the Greek 5.1 percent; and the Liberian 15.1 percent.

[13] Official government despatches, Athens, August 1965.

[14] Office of the Liberian Deputy Commissioner for Maritime Affairs.

Kingdom, must be taken into account. As of June 30, 1966, the following countries had under construction or on order:[15]

Country of Registry	Type of Ship							
	Passenger		Freighter		Bulk		Tanker	
	No.	GRT (000)	No.	DWT (000)	No.	DWT (000)	No.	DWT (000)
Denmark	0	0	23	196	8	282	5	329
France	2	23	15	157	14	508	16	1,529
West Germany	1	5	84	569	13	515	11	926
Greece	0	0	15	210	25	985	1	74
Italy	2	41	4	22	14	606	15	651
Japan	1	2	41	490	25	1,172	28	2,446
Liberia	0	0	6	78	96	4,174	36	2,805
Netherlands	0	0	20	195	4	139	9	904
Norway	3	27	51	357	120	4,911	70	5,401
Sweden	0	0	27	241	19	895	6	502
United Kingdom	1	58	54	584	37	1,554	23	1,095
United States	0	0	45	642	0	0	1	36
Total	10	156	385	3,741	375	15,741	221	16,698

Additionally, the developing nations are particularly interested in acquiring their own merchant fleets, either with second-hand tonnage or new ships, as a means of securing better shipping rates for their exports of raw materials and imports of finished products, and as a means of conserving their limited foreign exchange resources.[16]

3. At the U.S.S.R.'s projected rate of increase for its fleet, estimates[17] indicate that the Soviet merchant marine by the end of 1970 will comprise less than 6 percent of the world's oceangoing merchant tonnage *excluding the United States National Reserve Fleet.* In view of the 1966 to 1970 goals for the increased movement of cargo tonnages in the U.S.S.R.'s domestic and foreign trades, with special attention to the trade of its Comecon partners and the lesser developed nations,[18] it seems unrealistic, at least during the next five years, to believe the Soviet fleet

[15] U.S. Maritime Administration, Department of Commerce. Includes only oceangoing merchant ships of 1,000 gross tons and over.

[16] Shipping and Ocean Freight Rates. Regional Economic Cooperation in Asia and the Far East. Published by the United Nations. New York, 1965.

[17] By December 31, 1970, the authors of this study estimate the world's oceangoing merchant ships, of 1,000 gross tons and over, will total 260.6 million deadweight tons and the Soviet fleet 13.9 million deadweight tons, or 5.3 percent.

[18] Long turnarounds are involved in servicing East and West African nations, as well as those in the Middle and Far East and Cuba.

will become a major competitive threat to the suppliers of international shipping. For example:

a. The U.S.S.R. has required and will continue to need the services of non-Communist flag ships during the 1966 to 1970 period. In 1964, foreign flag ships carried slightly less than 50 million tons of cargo or about half of the total in the U.S.S.R.'s overseas trade.[19]

b. Realistic economic and political expediency would seem to dictate the continued use of foreign flag ships by the U.S.S.R. if for no other reasons than for " . . business cooperation" (with free world nations) and "for the development of foreign commerce."[20]

c. By 1970, the U.S.S.R. plans to increase the cargo tonnage carried by its flag ships in domestic and foreign trades to 1.6 times that of 1965. During the same period, however, the merchant fleet is expected to increase to 1.5 times. Relatively, cargoes are thus expected to increase at a faster rate than ship availabilities.[21]

d. Plans for the expansion of the domestic economy during the 1966 to 1970 period will necessitate increasing requirements for Soviet ships not only in the foreign trade but in the domestic trade as well. The economy and relative flexibility of using ships in moving cargoes between areas in the U.S.S.R. as opposed to other modes of transport, particularly for long hauls, may well result in an additional utilization of the Soviet merchant marine.[22]

e. Numerous factors are at work that may cut down the operating effectiveness of Soviet shipping, such as:

(1) Losses in operating time are believed to be high at a number of U.S.S.R., satellite nations' and lesser developed countries' ports which Soviet ships seek to serve, due to relatively inefficient loading and discharging facilities; lack of, or indifferent, warehousing accommodations; and an inadequate transport network (access roads, railroads, pipelines, tank storage farms among others) for the movement of cargoes to and from such ports. The bottlenecks that may occur could result in stretched-out turnaround time and poor utilization of ships,

[19] V. G. Bakayev, in Za Rubezhom (Life Abroad), reported in New York Times, March 26, 1965.
[20] Vodnyy Transport, Moscow, May 26, 1966.
[21] Vodnyy Transport, Moscow, April 26, 1966.
[22] Ibid.

all of which would undoubtedly drain off shipping capability for foreign trade service. The Ministry of the Merchant Fleet is giving much attention to port construction and improvements to facilitate cargo and ship movements.[23]

(2) Ship productivity appears to be leveling off.[24] While improved ship designs, technical advancements in propulsion and automation, and increased size and speed of ships will undoubtedly help to raise productivity ratios, their impact will be impaired unless improved coordination between ship arrivals, availability of cargoes, and clearing piers leading to faster ship turnarounds, can be achieved.

f. Since the Soviet merchant marine is a state-owned enterprise, it can be used as a political instrument for economic purposes and an economic instrument for political purposes. The Soviet shipping authorities could institute lower freight rates at any time and in any trade of their choosing for either of the foregoing purposes.[25] Such action, however, could be two-edged.

Since the U.S.S.R. at present is required to charter large tonnages of foreign flag shipping to meet its export and import needs,[26] and, according to V.G. Bakayev, will continue to depend upon foreign flag charters through at least 1970,[27] any reduction in charter rates resulting from a general lowering of freight rates initiated by the Soviets would be to their advantage; that is, the amount of convertible exchange they would have to disburse for foreign flag charters would be reduced.

The other edge concerns the acquisition of foreign exchange by the U.S.S.R. from shipping services. In this context reference is made to the numerous and continuing comments by Soviet shipping authorities and commentators, on the need for the merchant marine to earn convertible exchange to pay for the foreign flag ship charters.[28]

Soviet flag ships presently are carrying about half of the U.S.S.R.'s foreign trade.[29] They would carry more if it were

[23] Vodnyy Transport, Moscow, April 26, 1966.

[24] Alfred Boyer, "Quelques Aspects de L'Exploitation de la Flotte de Commerce Sovietique," Journal de la Marine Marchande, August 23, 1966.

[25] Soviet Weekly, January 21, 1967. A Soviet publication distributed in England.

[26] Vodnyy Transport, Moscow, April 26, 1966.

[27] Ibid.

[28] Ibid.

[29] Tass international service, Moscow, March 25, 1965.

economically feasible, since this would result in a smaller outflow of convertible currencies for chartered foreign flag ships. Under the conditions of maximized utilization of Soviet flag shipping in foreign trade, it is to the U.S.S.R.'s advantage to obtain the most favorable freight rates that would yield the highest returns of foreign exchange. Similarly, foreign exchange earnings from the chartering of Soviet flag ships to foreign operators[30] would be greater if charter rates were not depressed as a result of a freight rate war. The need for foreign exchange is a fact and constantly stated,[31] for the U.S.S.R. has had to make and is making large expenditures of gold and foreign exchange reserves[32] to:

(1) buy shipping services during recent years to make up the tonnage that was diverted to supply Cuban and, to a lesser extent, North Vietnamese economic and defense requirements;[33]

(2) buy and transport huge quantities of grains for the U.S.S.R. and dependent satellites due to poor harvests in the U.S.S.R. during the past few years;

(3) build ships in the free world shipyards;

(4) charter on a continuing basis the large quantities of free world shipping services to meet its own foreign trade needs, about 50 to 60 percent of which can and probably will be met by the Soviet merchant marine in the foreseeable future.

In this connection it should be noted that the Minister for the Merchant Fleet, V. G. Bakayev, has stated that the Soviet merchant marine has no intention of "hogging" shipping business or of cutting internationally agreed tariffs. In fact, he points out that the U.S.S.R. plays its full part in international maritime conferences so as not to disturb "existing balances," and that it adheres strictly to the tariff rates fixed by the large shipping conferences. He goes on to state:

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[30] Vodnyy Transport, Moscow, April 26, 1966.

[31] Ibid.

[32] Soviet bloc countries which have the U.S.S.R. as their principal trading partner are now demanding gold or transferable currencies for at least part of their transactions with the U.S.S.R. Since settlements are made in rubles, which are nontransferable, the bloc countries are tied to inter-bloc trade and restricted from the development of Western purchases.

[33] Free world ships trading with Cuba and North Vietnam are ineligible to carry U.S. Government-financed cargoes from the United States. Since the latter cargoes are considered more desirable over the long term than those destined for Cuba and North Vietnam, the U.S.S.R. finds it necessary to use a number of its own and satellite flag tankers and freighters to supply the latter areas, at the expense of operating on more profitable trade routes.

"The Soviet Union could act independently in the field of sea transport, but it does not wish to do so."

". . . It adheres to a policy of cooperation, and would in particular, like to see an international agreement or convention on the basic problems of world shipping." [34]

GROWTH OF THE SOVIET MERCHANT MARINE

One of the great national assets of the U.S.S.R. is its fleet of 1,345 merchant ships totaling 9.6 million deadweight tons.[35] It is a relatively youthful,[36] balanced merchant marine of all types of ships, which in the last decade has become one of the major fleets of the world. It is the product of a consistent maritime program corresponding with the national goals for total economic progress, according to Nikolai Dyakonov, a Soviet press commentator.

The rise of the Soviet fleet was rapid. In less than 20 years its tonnage increased by 3.5 times, its average age decreased from 22 years to 14 years, and the gain in speed of its major types of ships was significant (Table 2). Its ships no longer operate in rather restricted and somewhat parochial services but now are to be seen in many of the major ports of the world.[37]

Net additions to the fleet were relatively small between 1946 and 1955, averaging only 50,000 deadweight tons annually. It was not until 1960 that the U.S.S.R. gave impetus to its plans to build a strong, modern, and competitive merchant marine. By 1960 the fleet had almost doubled in tonnage over what it had been in 1946 (Table 1). It was still a merchant marine of contrasts in that the average ages of some segments of the fleet, such as bulk carriers and tankers, were 8 and 8.4 years, while those of freighters and passenger ships were 20.6 and 27.9 years respectively. Since the closing of the Suez Canal in 1956 pointed up the need for bulk carriers and tankers, data

[34] Soviet Weekly, January 21, 1967. A Soviet publication distributed in Great Britain.

[35] Maritime Administration, "Merchant Fleets of the World, December 31, 1965." Includes merchant type ships of 1,000 gross tons and over. Excluded are fishing vessels, tugs, icebreakers, cable ships, and other special types.

[36] 54 percent of the fleet was 10 years old or less on December 31, 1965 as compared with 38 percent for the world fleet and 19 percent for the U.S. privately owned merchant marine.

[37] According to Agitator, Moscow, No. 13, 1966, Soviet flag ships called at 800 ports in 85 countries during 1965. The number of ports visited varies with different publications, but they are indicative of the expanding operations of the Soviet merchant marine.

show that the construction of these two types was stepped up (Table 1).

Additions to the freighter and passenger segments of the merchant marine were relatively unimportant during the five-year period prior to 1960. Ships and tonnages increased moderately, but the effectiveness of new additions from construction was diluted by the large majority of both types of ships which were of pre-World War II vintage. By 1960 steps were being taken to dispose of inefficient and ancient tonnage and to upgrade the quality of the freighter group.

If the growth of the Soviet merchant marine had not been precisely outstanding prior to 1960, the expansion during the next five years was spectacular. The fleet practically doubled in tonnage from 4.9 million deadweight tons in 1960 to 9.6 million tons in 1965 (Table 1).

Between 1960 and 1965 freighters increased by a net of 321 ships and 2.3 million deadweight tons. There were 46 more bulk carriers, adding 242,000 deadweight tons to the fleet, or 1.5 times the tonnage that was in existence in 1960. The increase in the number and tonnage of tankers reflected the rise in crude and refined oil production and the need for tanker facilities to serve the widespread areas of the U.S.S.R. and foreign markets (Table 3). Although the number of tankers in 1965 was 1.7 times larger than the number in 1960, tonnage rose by 2.5 times indicating tankers of greater carrying capacity had been added to the fleet. The increase in the tanker fleet made it possible to increase shipments of oil products on Soviet tankers from 2.8 million tons in 1955 to 27 million tons in 1965.[38]

Passenger ships took on a somewhat new significance, since a number of the new ships were built for the international trades. A net of eight new passenger ships was added to the fleet during the last 5 years among which the sisterships IVAN FRANKO and the ALEXANDR PUSHKIN[39] are the showpieces

[38] Vodnyy Transport, Moscow, April 26, 1966.

[39] The IVAN FRANKO was built in 1964; the ALEXANDR PUSHKIN in 1965, a third sistership, the TARAS SHEVECHENKO, was built in 1966. All three were built in East Germany with passenger capacity of from 700 to 750 in one class depending upon whether the ships are employed in scheduled services or cruise trade. They have a gross of 19,900 tons and a speed of 20 knots. The ALEXANDR PUSHKIN is operated by the Baltic Steamship Company and the IVAN FRANKO and the TARAS SHEVECHENKO by the Black Sea Steamship Company. In April 1966 the ALEXANDR PUSHKIN inaugurated a regular schedule between Leningrad and Montreal with calls at Helsinki, Copenhagen, London and Quebec. The outbound and homeward voyages take somewhat more than a month.

of the Soviet merchant marine. They appear to be used in a very flexible manner either in regularly scheduled services or for the cruise trade as opportunity affords. During 1966, for example, their newest passenger ships operated under charter to West European operators for cruises from the U.S.S.R. and West European ports to the Mediterranean and Caribbean areas. Data are not available as to whether they are operating profitably. However, on their scheduled sailings to and from Canada and non-communist countries, and, when chartered to West European operators, they become earners of desired convertible exchange.

PROFILE OF THE SOVIET MERCHANT MARINE

An analysis of the ships under U.S.S.R. flag indicates that on an average basis, Soviet ships are smaller and slower than ships in the merchant fleets of the major maritime nations (Table 2). This may be due to several reasons:

1. Many of the U.S.S.R. ports and those of the Soviet's Comecon partners are not too deep nor well equipped, thus enabling a smaller size ship with its shallower draft to maneuver more effectively when loading or discharging cargo.

2. The U.S.S.R. has very extensive coastlines and numerous inland waterways and seas. Since one of the U.S.S.R.'s maritime goals is the expansion of its coastal shipping[40] the flexibility of the smaller ships with their lower draft can be used advantageously in lieu of other transportation modes to operate in this area.

3. Soviet naval architects and engineers indicate that ships which have a tonnage displacement to power in the ratio of 2:1 are more effective for operation in Arctic waters, providing their hulls are suitably strengthened. Since their northern waters are used to tap the rich timber and mineral wealth of Siberia with their shallow and, as yet, somewhat undeveloped ports, the smaller ships, especially small bulk carriers and timber ships, are more useful and productive than larger ships.

4. Large, fast ships are productive only if they can be turned around quickly. They would serve little purpose if after a quick crossing between ports they were forced to lie idle in

[40] Vodnyy Transport, Moscow, April 26, 1966.

port awaiting berths for loading or discharging cargoes because of inadequate facilities.

Passenger Ships

Of the 80 passenger ships totaling 433,000 gross tons under U.S.S.R. flag, 55, or 69 percent of the total, are less than 5,000 gross tons, and 16, or 20 percent, fall in the range from 5,000 to 10,000 gross tons. The remaining ships vary in size from 10,000 to 22,000 gross tons. Among the latter are the largest and oldest ship in the fleet, the SOVETSKY SOJUS, of 21,100 gross tons which was built in Germany in 1923 and two of the U.S.S.R.'s newest and fastest ships, the IVAN FRANKO and ALEXANDR PUSHKIN.[41]

Despite the fact that 29 ships totaling 200,000 gross tons are less than 10 years old (Table 4), the remaining ships are so old that the average age of the passenger fleet is raised to 24.4 years. Their average speed is estimated over-all at 14.6 knots.

Freighters Including Refrigerator Ships

This group is comprised of 892 ships whose deadweight totals 5.2 million tons or 54 percent of the entire tonnage of the Soviet merchant fleet. It is a diversified freighter fleet from the standpoint of carrying capacity, although 494 ships of 1.5 million deadweight tons or 55 percent of the ships and 29 percent of the tonnage comprise freighters whose deadweight is less than 5,000 tons. If the 226 ships of 1.6 million deadweight tons in the range from 5,000 to 10,000 deadweight tons are included with the foregoing group, the percentages are increased to 81 percent of the ships and 60 percent of the tonnage. These ratios show a great variance from the ratios of freighters in similar size groupings making up the world fleet;[42] namely 61 percent of the number and 42 percent of the tonnage of freighters less than 10,000 deadweight tons.

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[41] See Footnote 39.

[42] In order to obtain a more valid comparison, freighters in the U.S. National Defense Reserve Fleet and the U.S.S.R. merchant marine were subtracted from the world total. In this way the world fleet was not influenced by freighters tied up for long duration and by U.S.S.R. freighters with which a comparison is being made.

A majority of the freighter segment of the U.S.S.R. merchant fleet is relatively new. Of the 892 freighters, 346 totaling 2.4 million deadweight tons are five years old or younger and their tonnage comprises 46 percent of the total for all freighters. If those whose age is less than 10 years are included, the number is increased to 478 or 54 percent and their tonnage to 3.1 million deadweight tons or 59 percent of all U.S.S.R. freighters. When compared with the number and tonnage of freighters in the world fleet in the latter age group, the disparities are substantial since only 33 percent of the number and 34 percent of the tonnage in the world are less than 10 years old.

On the other hand, the average size (5,888 deadweight tons) and speed (12.6 knots) for U.S.S.R. freighters are less than those for freighters in the world fleet, viz.: 7,787 deadweight tons and 13.1 knots.

Bulk Carriers

It was not until after the Suez crisis of 1956 that the U.S.S.R. started a large bulk carrier program. In fact, as recently as 1956 there were only 20 bulk carriers totaling 73,000 deadweight tons under U.S.S.R. flag. By the end of 1965, the number had increased to 141 aggregating 714,000 deadweight tons (Table 1).

It is significant, however, that these ships are of small size ranging from a few thousand deadweight tons to less than 10,000 tons. About half of the bulk carriers are comprised of ships of less than 5,000 deadweight tons. Although the Suez crisis gave impetus to the worldwide construction of large bulk carriers and tankers, it would seem that the U.S.S.R.'s evaluation of its needs concluded that ships of small cargo carrying capacities would best serve its national requirements. As a consequence, the average size of bulk carriers under the U.S.S.R. flag is only 5,238 deadweight tons, far less than the 16,000 deadweight ton average for this type of ship in the world fleet.

Since the first sizable number of bulk carriers did not come into the U.S.S.R. merchant marine until 1956, the average age of the bulk carrier segment is 10.5 years. When the number which is less than 10 years old is analyzed, it is found that they make up about 43 percent of the bulk carrier type ships and 58 percent of the total bulk carrier tonnage.

Tankers

Between 1960 and 1965 the tanker segment of the Soviet merchant marine increased substantially, with a net gain of 98 tankers (73 percent) and some 2.1 million deadweight tons or two and one-half times the tonnage in 1960. It is sufficiently large that the U.S.S.R. can carry approximately half of its exports of crude oil and petroleum products in its own flag tankers.

In an era when 100,000 deadweight ton tankers are commonplace, and contracts for tankers of 250,000 deadweight tons and larger have been let, the small size of Soviet tankers is highlighted. Almost three-quarters of the tanker fleet is comprised of vessels under 12,000 deadweight tons, although their tonnage accounts for only one-third of the total deadweight tonnage. Of the 232 tankers in the Soviet merchant marine, 75 are vessels of under *5,000 deadweight tons;* and the six largest do not exceed 48,000 deadweight tons. The following tabulation points up the narrow spread in size ranges of the Soviet tanker fleet:

U.S.S.R. FLAG TANKERS BY SIZE GROUPS
As of December 31, 1965

Deadweight	Number
Under 5,000	75
5,000— 9,999	20
10,000—10,999	3
11,000—11,999	66
12,000—16,999	3
17,000—17,999	0
18,000—19,999	6
20,000—25,999	10
26,000—34,999	16
35,000—35,999	12
36,000—38,999	0
39,000—44,999	3
45,000—45,999	12
46,000—47,999	0
48,000—48,999	6
	232

Source: Maritime Administration, U.S. Department of Commerce.

Soviet tankers are also slower, on the average, than tankers in the world fleet. On the other hand, again based on averages,

they are far younger,[43] and in many respects more modern and flexible as to use.

Flexibility is a necessity for Soviet flag ships. They must be adaptable for so many different types of services,[44] both in the domestic and foreign trades. Although the U.S.S.R. may find it desirable and may even be anxious to increase the sale and transport of crude oil and petroleum products in foreign trade as a means of entering markets largely dominated by western producers, other considerations must be taken into account, such as:

1. Domestic transport requirements to serve a growing national economy.[45]

2. Economic and political considerations requiring transport services to serve the developing nations and to meet the needs of Cuba, North Korea, and North Vietnam for essential supplies of crude oil and refined petroleum products.

From an economic point of view the U.S.S.R. finds it desirable to increase the sale and transfer of crude oil and petroleum products to western nations since these commodities and shipping service are among the relatively few items it has for export. The foreign exchange thus earned is needed to pay for industrial, agricultural, and scientific equipment and supplies which the Soviets are buying from the West. Of the U.S.S.R.'s total exports of crude oil and petroleum products to the free world, approximately 75% goes to Western Europe. On the other hand the motivation for the export of the remaining 25 percent which goes to developing nations is primarily political, although what the U.S.S.R. receives in return often has economic value.[46]

It is estimated that about 50 percent of total oil exports to all areas is carried by Soviet tankers, and a high percentage (perhaps as much as 75 to 80 percent) of the remaining 50 percent is on ships under U.S.S.R. control on a charter basis.

SHIP CONSTRUCTION

The Soviet merchant marine is comprised of ships built in 21 foreign countries. It is significant, however, that of the

[43] Eight years versus 14 years.

[44] For example, the coastal seaborne trades, the Arctic service and inland seas and waterways to areas not readily accessible by other means of transportation.

[45] Vodnyy Transport, Moscow, April 26, 1966.

[46] U.S. Department of Interior, Office of Oil and Gas.

1,345 oceangoing merchant ships in the fleet on December 31, 1965, more than one-half or 713 ships were constructed in the U.S.S.R. and Soviet bloc countries (Table 5).[47] This is the important point to note. While utilizing the facilities of foreign shipyards to acquire ships either on an oil-for-tankers deal as with Italy, on a trade balance basis with Finland, or for transferable foreign exchange from Denmark and other western countries to meet its increasing vessel requirements, the fact should not be lost sight of that the U.S.S.R. and its satellites can, and do, supply the majority of the various types of ships for the Soviet fleet.

SHIPS ON ORDER AND UNDER CONSTRUCTION

On June 30, 1966, there were on order and under construction for the Soviet merchant marine in the U.S.S.R., satellite and all other countries a total of 552 oceangoing merchant ships, or 28 percent of all ships on order and building throughout the world (Table 6).[48] Of this number, 399 of all types were contracted for in the U.S.S.R. and satellite countries, as follows:

Country of Construction	Combination Pass/Cargo		Freighter*		Bulk Carrier		Tanker	
	No.	GRT (000)	No.	DWT (000)	No.	DWT (000)	No.	DWT (000)
Grand Total	12	105	403	2191	7	158	130	1891
Soviet Bloc	12	105	300	1523	7	158	80	1406
U.S.S.R.	9	51	83	699	0	0	55	1062
Bulgaria #	0	0	44	101	0	0	10	50
Czechoslovakia #	0	0	10	18	0	0	0	0
East Germany	3	54	48	215	0	0	0	0
Hungary	0	0	37	56	0	0	0	0
Poland	0	0	46	331	7	158	15	294
Rumania #	0	0	32	103	0	0	0	0
All Other	0	0	103	668	0	0	50	485
Denmark	0	0	2	5	0	0	0	0
Finland	0	0	68	343	0	0	34	152
Italy	0	0	5	22	0	0	0	0
Netherlands	0	0	4	10	0	0	0	0
Yugoslavia	0	0	24	288	0	0	16	333

* Includes refrigerator ships.

Source: Maritime Administration, U.S. Department of Commerce.

Available information indicates that the majority of these units will be shallow draft, motor ships for coastal, river and lake services.

[47] Bulgaria (17), East Germany (143), Hungary (104), Poland (195), Rumania (7), and U.S.S.R. (247). Yugoslavia (13) is not included in the above group because of its special relationships not only with the U.S.S.R., but with the United States and other countries of the West.

[48] Maritime Administration, U.S. Department of Commerce.

Combination Passenger/Cargo Ships

More passenger/cargo type ships are on order or under construction for the U.S.S.R. than for any other maritime nation.[49] One large passenger ship of 25,000 gross tons with a proposed speed of 24 knots is on order in the U.S.S.R. for the international trade. Present design specifications are for 1,200 passengers in two to six berth cabins. An unusual feature of the ship will be the strengthening of the hull for navigation where ice conditions are prevalent.

The three ships building in East Germany are sistherships[50] of the IVAN FRANKO, ALEXANDR PUSHKIN and TARAS SHEVECHENKO and will augment substantially the international passenger services of the Soviet merchant marine.

In keeping with U.S.S.R.'s requirements for specific type ships that can operate effectively in shallow water ports along its long coastline, the Soviet Ministry of the Merchant Fleet is building at its Riga and Zhdanov shipyards, a series of eight small passenger/cargo type ships, each of which will have a gross of 3,200 tons, 15 knots speed and a draft of only 20 feet.

Freighters

If the other principal maritime nations are concentrating their new construction efforts on bulk carriers and tankers, the Soviet Ministry of the Merchant Fleet is still endeavoring to augment its freighter fleets.[51] As of June 30, 1966, almost 39 percent of the total number of freighters and more than 27 percent of the total deadweight tonnage of all freighters on order or under construction throughout the world were for U.S.S.R. account (Table 6).

If any type of ship exemplifies the U.S.S.R.'s propensity for small, flexible, shallow draft ships, it is the freighter. The following table illustrates clearly the concentration on small specialized freighter types, built in series of large numbers, which tend to reduce construction costs considerably. At the same time each

[49] Upon delivery of the 12 passenger/cargo ships now on order and under construction, the U.S.S.R. will rank third in passenger tonnage after the United Kingdom and Italy.

[50] See Footnote 39.

[51] An analysis of the freighter fleets of the leading maritime nations shows that their freighter tonnages during the past five years has, with the exception of Liberia (much of which is comprised of second-hand tonnage), *actually declined.*

series embodies certain ship characteristics that enable the basin fleet to which they are assigned to operate them as effectively as possible.

FREIGHTERS ON ORDER AND UNDER CONSTRUCTION FOR THE U.S.S.R. BY COUNTRY OF CONSTRUCTION
As of June 30, 1966

Deadweight Tons (ea.)	Total No.	Country of Construction
1,500	74	Bulgaria and Hungary
1,600	5	Czechoslovakia
2,000	5	Czechoslovakia
2,500	12	Finland
2509–2550	2	Denmark
2,600	4	Netherlands
3,150	28	Rumania
3,400	38	Finland
3,500	7	U.S.S.R.
3,630	4	Rumania
4,000	6	U.S.S.R.
4,300	46	East Germany
4,400	5	Italy
4,500	17	U.S.S.R.
5,000	20	Bulgaria, Finland, East Germany and U.S.S.R.
5,800	7	U.S.S.R.
5,950	24	Poland
6,000	2	U.S.S.R.
7,000	16	Poland
7,500	5	U.S.S.R.
8,600	3	U.S.S.R.
10,000	2	Bulgaria
11,600	6	U.S.S.R.
12,000	24	Yugoslavia
12,200	13	Finland
12,400	1	East Germany
12,700	5	Poland
13,000	6	Poland and U.S.S.R.
16,000	16	U.S.S.R.
Total	403	of 2,168,500 deadweight tons.

Source: Maritime Administration, U.S. Department of Commerce; and Sudotroyeniye No. 1, January 1966, Moscow.

Of interest also are the larger type freighters that are under construction for the Soviet merchant fleet in the U.S.S.R., Poland, Finland and Yugoslavia. They are relatively fast ships of 17 knots with drafts of 29 and 29.5 feet, which points up the attention the Soviet shipping authorities are giving not only to vessel draft, but to the need for faster ships.

Eight ships, each of which will have a deadweight of

16,000 tons, 17 knots speed and a draft of 29 feet, are being built in a shipyard at Nikolayev on the Black Sea. An additional eight freighters are on order for construction at the Kherson Shipyard on the Black Sea. They are believed to be of the Leninsky Komsomol class which has a deadweight of 16,040 tons and a speed of 18 knots. Also building at the Black Sea shipyard at Kherson are five freighters, each of 13,000 deadweight tons with a speed of 17 knots and a draft of 29' 6".

The five freighters on order at the Zhdanov shipyard at Leningrad [52] each will have a deadweight of 7,500 tons, 16.4 knots speed and will be ice-reinforced. They will probably be destined for operation by one of the northern steamship lines.

Bulk Carriers

There is little concentration in the U.S.S.R. on the acquisition of bulk carriers. Although 490 of this type ship aggregating 18.8 million deadweight tons are on order and under construction throughout the world, building for the U.S.S.R. is limited to only 7 of 158,000 deadweight tons. Poland is building all seven, each of 22,500 tons and a speed of 15.5 knots.

According to Leningradskaya Pravda, dated November 10, 1966, the Baltic Shipyard at Leningrad is expected to begin the construction of ore carriers "of 45,000 tons displacement" (approximately 34,000 deadweight tons). The hull is planned to be heavier than usual in order to accommodate the high specific weight of the ore. Additionally, the ships are planned to have a second bottom and fore-and-aft bulkheads partitioning the hold which will prevent the ore from shifting.

Tankers

The Soviet Ministry of the Merchant Fleet is adding 130 tankers of 1.9 million deadweight tons to the U.S.S.R. merchant marine. It is, however, a small fraction of the 23.5 million deadweight tons on order and under construction for world merchant fleets, and falls far short of the tonnage building for Norway (5.4 million deadweight tons), Liberia (2.8 million deadweight tons) and Japan (2.5 million deadweight tons).

[52] These ships are of the KALININGRAD class and have the following additional characteristics: Diesel 5400 HP, length over-all 426', beam 59', large hatches, deck cranes and a cruising range of 12,000 miles.

Of the 130 tankers, 71, or more than half, are in size ranges of less than 10,000 deadweight tons. In all of the present Soviet tanker fleet of 232 tankers, the largest size is 48,000 deadweight tons, of which there are only six. There are, however, 10 tankers of 47,000 deadweight tons building in the U.S.S.R. at the Baltic Shipyard and at the Admiralty Shipyard, both of which are located at Leningrad. They will have a speed of 19 knots and an estimated draft of 38 feet, which is large for a Soviet flag ship. Also listed for construction at the above shipyards are four tankers of 60,000 deadweight tons.[53] They will have a proposed speed of 17 knots and a draft of 40 feet. Tankers of this size will be able to operate from a limited number of U.S.S.R. ports because of their large draft.

Although Soviet naval architects such as Dimitri Sokolov have pointed out the need and desirability of larger size tankers (75,000 to 80,000 deadweight tons) because of their greater economy and operating efficiency, as far as is known, none has appeared on the order books of U.S.S.R. or foreign shipyards.

The following table illustrates the various size groups of tankers and the number in each series that are on order and under construction in the U.S.S.R. and foreign shipyards:

TANKERS ON ORDER AND UNDER CONSTRUCTION FOR THE U.S.S.R. BY COUNTRY OF CONSTRUCTION
As of June 30, 1966*

Deadweight Tons (ea.)	Total No.	Country in Which Building
2,000	4	U.S.S.R.
4,400	22	Finland
4,600	12	Finland
4,700	11	U.S.S.R.
5,000	12	U.S.S.R. and Bulgaria
7,500	10	U.S.S.R.

[53] There is some doubt as to whether tankers of this deadweight tonnage are actually being built since tankers on order for the U.S.S.R. of 60,000 deadweight tons have been on the Maritime Administration lists for several years and none has been delivered. This discrepancy could be attributed to variance in the manner of reporting ship tonnages. The SOFIYA class of tankers which has a deadweight of 47,000 tons has a displacement of 62,000 tons and it may be that some confusion exists between the two types of tonnages. Characteristics of the SOFIYA class tankers are: length 756′ 3″, beam 101′ 9″, draft 37′ 9″ (loaded), deadweight 47,000 tons, speed 17 knots, shaft horsepower 19,000.

TANKERS ON ORDER AND UNDER CONSTRUCTION FOR THE U.S.S.R. BY COUNTRY OF CONSTRUCTION — Continued
As of June 30, 1966*

Deadweight Tons (ea.)	Total No.	Country in Which Building
12,000	1	U.S.S.R.
15,000	13	U.S.S.R.
19,000	6	Poland
20,000	9	Poland
20,800	13	Yugoslavia
21,000	3	Yugoslavia
47,000	10	U.S.S.R.
60,000 [54]	4	U.S.S.R.
Total	130 of 1,891,000 deadweight tons.	

Source: Maritime Administration, U.S. Department of Commerce.

*In September 1966 a tanker, the VLADIVOSTOK, was under construction at the Baltiyskiy Yard in Leningrad inaugurating a new class of tankers of 21,000 tons displacement (16,800 deadweight tons). The VLADIVOSTOK type tanker is being built so that it can enter shallow ports and carry petroleum cargoes in "small portions." The VLADIVOSTOK is expected to enter service in 1967. (Leningradskaya Pravda, November 10, 1966)

U.S.S.R. SEABORNE DOMESTIC AND FOREIGN TRADE

Although seaborne shipping plays, as yet, a somewhat modest role in the total transportation economy of the U.S.S.R., it has been expanding very rapidly in the past five years. Emphasis on the economic development of the eastern and northern regions of the U.S.S.R. and the growth of the Soviet's foreign economic relations are major factors in promoting the further development of the Soviet merchant marine.

Data differentiating domestic and foreign seaborne trade are not always available, and U.S.S.R. statistics are not usually stated on a comparable basis with those of other maritime nations. Nonetheless, the information contained in the following tables does illustrate the extent to which U.S.S.R. cargoes moving by sea have increased in a relatively short period, and as a rationale for the continuing growth of the Soviet merchant fleet.

MOVEMENT OF U.S.S.R. FREIGHT BY SEA: 1950-1970
(In Billions of Ton-Miles)

Year	Freight
1950	21.4
1956	44.5
1960	71.0
1962	93.6
1963	122.2
1964	160.7

[54] See footnote 53.

MOVEMENT OF U.S.S.R. FREIGHT BY SEA: 1950-1970
(In Billions of Ton-Miles) — Continued

Year	Freight
1965	209.9
1970	380.0*

* Projection made by Viktor Bakayev, U.S. Transport, December 1, 1966, page 4.

Source: 1950–1965 Narodnoye Khozyaystvo SSSR. For various years 1950–1965.

U.S.S.R. SEABORNE FOREIGN TRADE: 1958-1965
(In Thousands of Metric Tons)

Year	Total	Exports	Imports
1958	26,566	22,372	4,194
1959	34,807	30,136	4,671
1960	44,690	38,765	5,925
1961	58,528	51,181	7,347
1962	66,963	60,045	6,918
1963	75,607	66,732	8,875
1964	83,674	71,450	12,224
1965	91,837	79,088	12,749

Source: Compendium of External Trade for the U.S.S.R.

CHARTERING ACTIVITIES

Foreign and domestic trade and shipping in the Soviet Union are closely interrelated. Until 1962, chartering and forwarding activities were controlled by the Ministry of Foreign Trade through an organization known as SovFracht. In the latter year, as a result of the growing importance of Soviet shipping activities and the apparent need for closer coordination in the utilization of Soviet owned and chartered ships, SovFracht and its functions were transferred to the Ministry of the Merchant Fleet.[55]

The great expansion in Soviet foreign trade (Table 7) during the past decade required the chartering of large numbers of foreign flag ships and, as a consequence, SovFracht became one of the most important agencies in Soviet shipping activities. It was an influencing factor in world chartering markets and because of the volume of shipping that is handled for the Soviet Ministry of the Merchant Fleet, SovFracht was able to obtain charters at reasonable rates that were contributing factors to the substantial growth of Soviet foreign commerce.

[55] Most of the forwarding functions of SovFracht were subsequently turned back to the Ministry of Foreign Trade and were included in an organization known as "Soyuzvneshtrans."

SovFracht's principal functions are:

1. Representing Soviet foreign trade organizations in arranging time and voyage charters of foreign flag ships.

2. Advising the Ministry of the Merchant Fleet and other U.S.S.R. agencies interested in shipping matters, which might be required to charter tonnage or quote prices including freight rates on charter and liner rates.

3. Acting as agent on behalf of foreign charterers and shipowners, as well as booking liner space on Soviet and foreign flag ships to any destinations SovFracht had applied for membership on the Baltic Exchange in London, one of the most important centers for chartering ships in the world, but as yet membership has not been granted. Despite this setback SovFracht's ability to charter ships at effective rates is not diminished, because the U.S.S.R.'s expanding trade and shipping requirements will, for some years to come, make SovFracht one of the most influential organizations in the world's charter markets.

According to Viktor Bakayev, Minister of the Merchant Fleet, the planned freight turnover will increase in the next 5 years from 208.8 billion ton miles to 380 billion ton miles, an 82 percent increase,[56] but the tonnage of the U.S.S.R.'s ocean-going merchant fleet is expected to increase by some 45 percent. Granted that higher speeds, greater vessel productivity and the fact that certain types of ships such as bulk carriers (including ore and ore/oil carriers) and tankers have a greater carrying capacity utilization per annum than ships in the deep sea liner trades,[57] all of which would require the use of a smaller ratio of ships to cargo—nonetheless, cargo export and import requirements as envisaged by the U.S.S.R. Ministries of Foreign Trade and the Merchant Fleet will require the use of large tonnages of foreign shipping on a voyage or time charter basis,

[56] Soviet Novosti Press Agency (APN) as reported in U.S. Transport of December 1, 1966, page 4.

A revised estimate of 209.9 billion ton miles was published in the latter part of 1966. The estimated increase between 1965 and 1970, therefore, would be 81 percent.

[57] It is estimated that freighters engaged in transocean liner services, whose cargoes are general in nature for delivery at a number of ports on a given trade route, carry about four times their cargo deadweight per annum. On the other hand, estimates of the amount of cargo bulk carriers and tankers carry range up to 10 times their cargo deadweight. This is so because their operation is much simpler and their turnaround time at loading and discharging ports about three times faster than general cargo ships.

particularly in those instances where the Soviet authorities desire to control shipments and receipts of their cargoes.

SOVFRACHT is also chiefly instrumental in arranging for charters of Soviet flag ships to foreign operators. Soviet shipping authorities are promoting the availability of their ships, particularly those of small and medium size, to foreign charterers for trade in the Baltic, North Sea, and Mediterranean during the spring and winter seasons.[58] Furthermore, Soviet ships which operate in the Far East and Mediterranean services, for example, may often return to Soviet ports in ballast, and such ships are available for the movement of cargoes from one foreign port to another at attractive rates.[59]

The present five year plan (1966–1970) envisions an increase of from two to two and one-half times in the chartering operations of Soviet flag ships. It is expected that the income from such operations will result in enough foreign exchange to cover expenditures for Soviet chartered foreign flag tonnage during the foregoing period.[60]

One of the newest Soviet passenger ships, the ALEXANDR PUSHKIN, was chartered by a Swedish company for cruises to the West Indies from Scandinavia for the period December 1966 to March 1967. Recently, Swedish companies have also chartered Soviet flag timber carriers for operations between Swedish and Mediterranean ports.

SHIPPING CONFERENCES AND POOLING AGREEMENTS[61]

For many years Soviet shipping did not participate in shipping conferences. One reason may have been that the bulk of

[58] U.S. Government despatches and Fairplay Shipping Journal, August 18, 1966.

[59] Ibid.

[60] Vodnyy Transport, Moscow, April 26, 1966.

[61] A steamship conference is composed of companies providing liner service between the areas set forth in the agreement. A steamship conference is essentially a rate-making body. The basic purpose of the conference is to reach common agreement among members with respect to transportation rates and other conditions of carriage of goods or of passengers. The conference agreement constitutes the written charter of the steamship conference. It defines the scope of authority; provides the basis for violation charges; and conditioned upon its approval by the Federal Maritime Commission (where the United States is concerned) formally immunizes the conference members from prosecution under the anti-trust laws of the United States for acting pursuant to its provisions. A pooling agreement is an arrangement between carriers for the division of revenues derived from the operation of vessels in the particular trade covered, pursuant to a formula set forth in the agreement which prescribes minimum sailing requirements and the percentage of each carrier's participation in the total revenue pool.

the cargoes carried by ships in their major liner services were moving on routes generally not subject to conference rates.

As Soviet shipping activities became world-wide in scope and their authorities less parochial in their outlook, membership in shipping conferences and participation in pooling agreements appeared advantageous. Accordingly, membership was sought in at least three of the major cargo and passenger conferences.

In November 1965, the Baltic Steamship Line of Leningrad, whose fleet is believed to include about 111 ships of 627,000 gross tons, was accepted as a member-shipowner of the Baltic and International Maritime Conference effective as of January 1, 1966. The Conference, whose headquarters are in Copenhagen, Denmark, is believed to have members from 66 countries whose ships total 45 million gross tons or about 30 percent of the world's merchant tonnage. It is really an exclusive trade association with none of the functions of a shipping conference. Rather, it serves its members by furnishing them with information on current hydrographic data, port conditions, objectionable clauses in bills of lading and charter parties, and frequently serves as arbitrator in disputes involving charter parties, bills of lading and labor agreements. It is not a maritime exchange and no fixtures are made there.

With the advent of their new passenger ships into the Atlantic service, the Baltic Steamship Line of Leningrad applied for and was granted membership in the Trans-Atlantic Passenger Conference,[62] outbound, from Canada and the United States, with headquarters in New York. Membership was also granted in the Atlantic Passenger Steamship Conference,[63] inbound to North America, with headquarters at Folkestone, Kent, England.

The advantages to be gained by pooling arrangements over some of the routes served by Soviet steamship lines are also recognized by Soviet shipping authorities. Pooling agreements between specific Soviet shipping lines and those of Belgian,

[62] Area includes U.S. Atlantic, Gulf and Great Lakes ports; Canadian Atlantic, St. Lawrence River and Newfoundland ports; European ports; Asian and African ports bordering the Mediterranean Sea when tickets are sold on the North American continent. The Conference has 22 member lines from 16 countries and eight associate members from eight countries.

[63] Area includes all ports in Europe, Mediterranean and Black Sea countries; ports in Morocco, Spain and Azores; and North American Eastern ports, including St. Lawrence River, Great Lakes and U.S. Gulf ports. The Conference has 22 members from 14 countries and 10 associated members from 7 countries.

Bulgarian, French, East and West German, Indian, Japanese, Netherlands, United Arab Republic, and British shipping companies are believed to be in force on a cargo sharing basis.[64]

In addition to seeking membership in shipping conferences and pooling arrangements, Soviet authorities have also concluded bilateral agreements on shipping matters with a number of countries, notably India and the United Arab Republic. A recent statement by Viktor Bakayev[65] noted that:

> ". . . Maritime countries engaged in considerable goods exchange come up against many specific issues in the field of navigation (shipping), which have to be dealt with on a bilateral basis . . ."
> ". . . Agreements among countries on mercantile navigation (shipping) are the highest form of such relations. They may solve a wide range of problems. Such an agreement between Great Britain and the U.S.S.R. is known to have been agreed upon during Prime Minister Harold Wilson's recent visit to Moscow. The maritime organs of the U.S.S.R. intend to develop on large scale bilateral relations on the basis of equality and mutual advantage."

INTERNATIONAL ORGANIZATIONS

The U.S.S.R. makes its voice heard on maritime matters through its membership in a number of international organizations, among which the Intergovernmental Maritime Consultative Organization (IMCO), comprised of 63 member nations, is probably one of the most important. The interests of the Organization lie mainly in ships used in international services, and its objectives are to facilitate cooperation among governments on technical matters affecting shipping, and with special responsibility for the safety of life at sea.

Since the U.S.S.R. has one of the largest and most modern fishing fleets in the world, it is especially interested in the Working Group on the stability of fishing vessels in whose activities its representatives participate. The U.S.S.R. delegation plays an active role in IMCO deliberations and in its several subsidiary bodies such as the Assembly, Council and Maritime Safety Committee.

Some of the other organizations that are international in scope and in which the U.S.S.R. holds memberships are:

The International Labor Organization (ILO), in collaboration with IMCO through a joint committee, establishes programs

[64] R. L. Guberman, et al, Organizatsiya Perevozok Eksportnykh i Importnykh Gruzov SSSR, Moscow, 1962.

[65] Soviet Novosti Press Agency (APN) as reported by U.S. Transport, December 1, 1966, page 5.

for training seafarers in the use of the latest safety devices for ships as well as regulations for their use by member nations' ships.

The United Nations Conference on Trade and Development (UNCTAD), Shipping Committee is a specialized agency within the United Nations with a 55 nation Trade and Development Board which carries out the continuing work of the Conference between plenary sessions. The Shipping Committee is concerned, among other matters, with the problems of international liner freight rates and services as they affect trade between the developing nations and the highly industrialized regions of the world, the development of merchant fleets and port facilities in the developing countries and other shipping problems of an economic nature. The U.S.S.R.'s position in the Shipping Committee is expressed in the following statement by Viktor Bakayev:[66]

> ". . . The Shipping Committee under the UN Conference on Trade and Development may become to be the foundation for dealing with shipping problems.
>
> "Until now, international maritime organizations focused their attention on the legal and technical aspects of shipping, whereas the statute of the new intergovernmental body permits to deal on a much wider scale with the numerous problems of world sea shipments, including the commercial relations between shipowners and shippers. This may be considered to be the beginning of putting the solution of all the problems of world shipping on an intergovernmental footing.
>
> "It is to be expected that in the future there will appear specialized organizations either under the UN Shipping Committee or outside it, which will deal with and solve a number of shipping problems on an intergovernmental basis, among them the issues of unifying port facilities, vessels, their servicing at ports, shipping documents, tariffs, rates, dues, etc.
>
> "The result, I think will be that the now existing numerous international conferences and shipping organizations, which developed on the private enterprise basis, will gradually die-off or merge with intergovernmental bodies . . ."

The Permanent International Association of Navigation Congresses (PIANC) offers the U.S.S.R. a forum for discussion and information on the technical and economic problems of shipping and seaports—subjects of great and continuing interest to Soviet shipping authorities. PIANC, whose headquarters are in Brussels, Belgium, acts as an international clearing house of information on maritime matters, particularly ports and harbor developments.

The listing is by no means inclusive. The organizations are

[66] Soviet Novosti Press Agency (APN) as reported by U.S. Transport, December 1, 1966, page 5.

noted only to give some idea of the U.S.S.R.'s participation in international forums concerned with maritime matters.

CONCLUSIONS

1. The U.S.S.R. is one of the world's leading maritime powers. The nation is actively engaged in the development of its maritime industries and, under the direction of the Ministries of the Merchant Fleet and of the Shipbuilding Industry, continuing programs are being pursued in the areas of ship construction, ship repair, port development, research and development, and maritime personnel training facilities.

2. The Soviet merchant marine will probably increase at a net annual rate of one million deadweight tons for the five year period ending in 1970.

3. On the other hand, it is estimated that, after exclusion of the U.S.S.R. tonnage from the world total, the net annual growth for all other merchant fleets combined over the next five years will be about eight million deadweight tons.

4. Although the Soviet merchant fleet has increased substantially since 1960, the U.S.S.R. is dependent upon "supplier" nations of the West for ships to move about 50 percent of its cargoes in foreign trade. An analysis of the planned growth of U.S.S.R. international commerce, its proposed shipping availabilities, and statements of Soviet shipping authorities indicates that foreign ship charters for the movement of a sizable portion of the U.S.S.R.'s external trade will still be required by 1970.

5. It does not appear realistic to assume that the U.S.S.R. will offer strong competition to the traditional "suppliers" of shipping within the next five years—and probably not within the next ten years for the following reasons:

a. Exclusive of Soviet merchant tonnage, the absolute net growth in tonnage of the remaining maritime nations is estimated at about eight times greater annually than the increase in the Soviet fleet.[67]

b. The U.S.S.R. has its own domestic shipping requirements and those of the satellite nations with which to contend.

[67] This relationship could be even greater since many of the ships on order in the U.S.S.R. and satellite countries are on a planned basis and may extend over a period of five years, whereas ships on order in non-socialist countries are usually delivered within one or two years.

c. The developing nations are particularly interested in acquiring their own merchant fleets, either with second hand tonnage or from new construction, as a means of securing better shipping rates for their exports of raw materials and imports of finished products, and as a means of conserving their limited foreign exchange resources.

d. The U.S.S.R. has, at best, 4.6 percent of the merchant tonnage of the world. By 1970, it is estimated Soviet flag ships will increase their relative position only slightly to less than 6 percent.

e. The U.S.S.R. has professed continued need for Western shipping services in developing its own foreign trade. Moreover, statements have been made by Soviet shipping authorities that they have no desire to disturb "existing balances" in international shipping and, in fact, have affirmed their strict adherence to conference freight rates.

f. The U.S.S.R. has demonstrated the need to maximize its acquisition of foreign exchange from its shipping services, which is one of its significant exportable items, in order to pay for:

(1) present and future charters of foreign flag ships;

(2) essential food grains required for its own use and for shipments to nations within its orbit and those it seeks to influence;

(3) the purchase of highly technical equipment which is required for its own industrial development, and;

(4) ships built in foreign countries which are not acquired on a bilateral trading basis.

g. A number of the satellite nations such as Poland, Czechoslovakia and Rumania, for example, which are among the U.S.S.R.'s principal trading partners, are now demanding gold or transferable exchange, at least for part of their transactions with the U.S.S.R. Since settlements are now made in rubles, which are nontransferable, the bloc countries are tied to interbloc trade and restricted in their purchases of desired goods from Western nations.

TABLE 1

MERCHANT FLEETS[1]

World, United States, and Union of Soviet Socialist Republics
As of December 31, 1946, 1950, 1956, 1960, 1965 and 1970 (Est.)

(Tonnage in Thousands)

	1946		1950		1956		1960		1965		1970 Estimated
	No.	DWT Tons	No.	DWT Tons	No.	DWT Tons	No.	DWT Tons	No.	DWT Tons	DWT Tons
World Total	*12,273*	*97,884*	*13,282*	*107,215*	*15,615*	*136,880*	*17,317*	*171,890*	*18,329*	*217,229*	[4] *260,600*
Combination	998	5,221	1,117	6,558	1,295	7,314	1,254	7,021	1,091	5,593	
Freighter / Bulk	9,297	69,490	9,466 561	71,565 2,776	10,782 704	81,508 5,122	11,515 1,182	88,186 12,936	11,709 1,947	90,766 31,147	
Tanker	1,978	23,173	2,138	26,318	2,834	42,936	3,366	63,747	3,582	89,723	
U. S. Total [2]	*4,446*	*46,743*	*3,401*	*36,450*	*3,108*	*33,674*	*2,926*	*32,568*	*2,376*	*28,283*	[5] *18,400*
Combination	103	710	82	633	249	1,711	309	2,070	227	1,488	
Freighter / Bulk	3,458	33,530	2,795 54	28,301 640	2,446 40	25,221 564	2,138 57	21,878 805	1,747 61	18,127 1,107	
Tanker	885	12,503	470	6,876	373	6,178	422	7,815	341	7,561	
U. S. Private—Total	N.A.		*1,087*	*13,197*	*1,059*	*13,537*	*1,008*	*14,088*	*948*	*14,650*	[5] *13,500*
Combination			44	324	38	363	37	336	27	238	
Freighter			550	5,555	640	6,771	576	6,169	585	6,651	
Bulk			50	633	40	564	57	805	60	1,096	
Tanker			443	6,685	341	5,839	338	6,778	276	6,665	
U. S. Government—Total [2]	N.A.		*2,314*	*23,253*	*2,049*	*20,137*	*1,918*	*18,480*	*1,428*	*13,633*	[5,6] *4,900*
Combination			38	309	211	1,348	272	1,734	200	1,250	
Freighter			2,245	22,746	1,806	18,450	1,562	15,709	1,162	11,476	
Bulk			4	7	0	0	0	0	1	11	
Tanker			27	191	32	339	84	1,037	65	896	

U.S.S.R. Total [3]	*507*	*2,699*	*515*	*2,582*	*716*	*3,439*	*873*	*4,939*	*1,345*	*9,561*	[7] *13,900*
Combination	58	224	64	242	71	268	73	278	80	234	
Freighter	411	2,184	408	2,093	538	2,522	571	2,841	892	5,188	
Bulk			12	49	20	73	95	472	141	714	
Tanker	38	291	31	198	87	576	134	1,348	232	3,425	

[1] Oceangoing ships of 1,000 gross tons and over. Excludes fishing vessels, ice breakers, self-propelled barges, river vessels, canal boats, etc.

[2] Excludes all U.S. Government-owned ships transferred under lend-lease agreements.

[3] Includes U.S. Government-owned ships transferred under lend-lease agreements.

[4] Based on data derived from ships on order and under construction and loss and scrapping rates. It is believed this total may be somewhat understated.

[5] Based on Maritime Administration projections.

[6] Excludes ships designated for scrapping.

[7] Based on estimates made by V. G. Bakayev and data of U.S.S.R. ships on order and under construction throughout the world, as well as scrapping and loss rates.

N.A.—not available.

Source: Maritime Administration, U.S. Department of Commerce.

TABLE 2

Oceangoing Merchant Type Ships of 1,000 Gross Tons and Over Showing Average Age, Gross[1] or Deadweight and Speed, by Type of Ship and Country As of June 30, 1950 and December 31, 1956, 1960 and 1965

	Combination Pass/Cargo Average			Freighter Average			Bulk Carrier Average			Tanker Average		
	Age	Gross Tons	Speed	Age	DWT Tons	Speed	Age	DWT Tons	Speed	Age	DWT Tons	Speed
1965												
World	*19.7*	*8,315*	*15.8*	*15.3*	*7,787*	*13.1*	*9.9*	*16,088*	*13.0*	*14.0*	*25,134*	*14.3*
U.S. Total	20.3	9,593	16.6	20.2	10,342	13.0	20.2	18,213	13.7	16.6	22,226	15.0
U.S. Privately Owned	13.7	15,037	19.6	17.4	11,382	15.9	20.3	18,333	13.8	15.5	24,211	15.1
U.S. Government Owned	21.2	8,858	16.2	21.6	9,818	11.5	22.0	10,500	10.0	21.5	13,777	14.5
U.S.S.R.	24.4	5,388	14.6	15.2	5,888	12.6	10.5	5,238	11.8	8.1	14,875	13.3
1960												
World	*18.8*	*8,561*	*15.3*	*14.5*	*7,673*	*12.3*	*10.9*	*11,436*	*11.9*	*9.7*	*19,900*	*13.8*
U.S. Total	16.3	10,242	16.1	16.3	10,149	12.0	15.7	15,474	12.2	13.7	19,084	14.6
U.S. Privately Owned	13.8	14,068	18.7	15.2	10,648	14.7	15.7	15,474	12.2	12.9	20,750	14.7
U.S. Government-Owned	16.6	9,722	15.8	16.7	9,966	11.1	0	0	0	16.5	12,381	14.2
U.S.S.R.	27.9	5,041	13.6	20.6	4,947	10.8	8.0	5,237	11.7	8.4	10,116	12.1

1956

World	*18.7*	*8,108*	*14.8*	*15.2*	*7,616*	*11.7*	*17.1*	*7,479*	*10.6*	*10.2*	*15,464*	*13.0*
U.S. Total	14.4	10,008	15.7	12.5	10,261	11.7	11.4	15,575	12.3	11.5	16,752	14.0
U.S. Privately Owned	12.2	12,763	17.9	12.0	10,655	14.4	11.4	15,575	12.3	11.4	17,308	14.2
U.S. Government-Owned	14.8	9,512	15.3	12.7	10,122	10.8	0	0	0	12.6	10,828	12.0
U.S.S.R.	30.2	4,986	13.0	26.3	4,716	10.3	30.4	2,900	10.2	11.1	7,282	11.2

1950

World	*21.4*	*7,390*	*14.4*	*13.8*	*7,470*	*11.6*	*20.2*	*5,066*	*10.4*	*12.1*	*12,300*	*11.9*
U.S. Total	18.8	10,675	16.6	6.9	9,674	12.2	12.0	11,795	11.3	8.7	14,456	12.7
U.S. Privately Owned	13.6	N.A.	N.A.	7.1	N.A.	N.A.	11.6	N.A.	N.A.	8.9	N.A.	N.A.
U.S. Government-Owned	30.7	N.A.	N.A.	6.8	N.A.	N.A.	32.0	N.A.	N.A.	6.5	N.A.	N.A.
U.S.S.R.	24.2	4,930	13.0	27.2	5,146	10.4	31.5	4,318	9.9	22.5	6,530	11.0

[1] For combination passenger/cargo ships only.

N.A.—not available.

Source: Maritime Administration, U.S. Department of Commerce.

TABLE 3

Petroleum Exports of the U.S.S.R.: 1950, 1956, 1960–1965

(In Millions of Metric Tons)

	Total[1]	Of Which by Sea[2]
1950	1.1	0
1956	10.1	6.4
1960	33.2	24.1
1961	41.2	31.5
1962	45.4	34.3
1963	51.4	38.4
1964	56.6	41.9
1965	64.4	46.3

Sources: [1] Compendium of External Trade for the U.S.S.R.
[2] Statistical Office, United Nations.

TABLE 4

Oceangoing Merchant Ships in the World, U.S.S.R., and United States Fleets: 1965

Five Years Old and Under; and Under 10 Years Old

(Tonnage in Millions)

Age Groups / Fleets	Total—All Types						Combination-Passenger/Cargo						Freighter						Bulk						Tanker					
	No.	%	Gross Tons	%	DWT Tons	%	No.	%	Gross Tons	%	DWT Tons	%	No.	%	Gross Tons	%	DWT Tons	%	No.	%	Gross Tons	%	DWT Tons	%	No.	%	Gross Tons	%	DWT Tons	%
Five Years and Under																														
World	3,511	19	43.9	29	65.3	30	101	9	.9	10	.4	7	1,828	16	11.3	17	14.5	16	702	36	10.8	53	16.4	53	880	29	20.9	37	34.0	38
U.S. (Private)	112	12	1.5	15	2.1	14	4	15	0	0	0	0	85	15	.9	18	1.1	17	1	2	0	0	0	0	22	8	.6	15	1.0	15
U.S. (Government)	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
U.S.S.R.	473	35	3.6	49	4.6	48	16	20	.1	23	0	0	346	49	2.0	49	2.4	46	8	6	.02	3	.03	5	103	44	1.5	62	2.2	64
Under Ten Years																														
World	6,942	38	77.1	51	113.4	52	180	17	1.7	19	.8	14	3,816	33	23.0	35	30.1	34	1,174	60	15.4	76	23.3	75	1,772	50	37.0	65	59.2	66
U.S. (Private)	175	19	2.7	27	3.9	27	8	30	.1	5	.1	7	96	16	1.0	8	1.2	7	1	2	0	0	0	0	70	25	1.6	34	2.6	34
U.S. (Government)	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U.S.S.R.	720	54	5.0	68	6.3	66	29	36	.2	50	0	0	478	54	2.5	62	3.1	59	61	43	.3	56	.4	58	152	66	2.0	83	2.8	82

Source: Maritime Administration, U.S. Department of Commerce.

TABLE 5

Country of Construction of Ships[1] in the U.S.S.R. Merchant Fleet As of December 31, 1965

Country of Construction	Total No. of Ships	Year Built										
		1965	1964	1963	1962	1961	1960	1959	1958	1957	1956	Prior to 1956
All Countries—Total	*1,345*	*114*	*98*	*107*	*95*	*65*	*88*	*65*	*43*	*51*	*55*	*564*
Freighter	892	82	72	80	66	44	50	33	26	25	20	394
Combination	80	1	3	4	3	5	9	2	2	0	1	50
Bulk	141	6	0	4	2	4	11	16	9	15	21	53
Tanker	232	25	23	19	24	12	18	14	6	11	13	67
U.S.S.R.—Total	*247*	*32*	*20*	*26*	*19*	*15*	*17*	*12*	*9*	*21*	*15*	*61*
Freighter	138	25	15	21	17	9	6	4	6	10	4	21
Combination	14	0	0	2	0	3	2	0	0	0	0	7
Bulk	0	0	0	0	0	0	0	0	0	0	0	0
Tanker	95	7	5	3	2	3	9	8	3	11	11	33
Other Soviet[2]—Total	*466*	*42*	*31*	*52*	*43*	*37*	*52*	*41*	*26*	*18*	*20*	*104*
Freighter	287	34	26	40	28	28	32	21	15	3	4	56
Combination	25	1	3	2	3	2	7	2	2	0	1	2
Bulk	127	6	0	4	2	4	11	16	9	15	15	45
Tanker	27	1	2	6	10	3	2	2	0	0	0	1
All other—Total	*632*	*40*	*47*	*29*	*33*	*13*	*19*	*12*	*8*	*12*	*20*	*399*
Freighter	467	23	31	19	21	7	12	8	5	12	12	317
Combination	41	0	0	0	0	0	0	0	0	0	0	41
Bulk	14	0	0	0	0	0	0	0	0	0	6	8
Tanker	110	17	16	10	12	6	7	4	3	0	2	33

[1] Ships of 1,000 gross tons or over.
[2] Bulgaria, E. Germany, Hungary, Poland, Rumania (no ships built in Czechoslovakia).

Source: Maritime Administration, U.S. Department of Commerce.

TABLE 6

Number and Tonnage of Steam and Motor Vessels Under Construction and/or On Order Arranged by Country of Construction and Country of Intended Registration Oceangoing Merchant Vessels of 1,000 Gross Tons and Over, As of June 30, 1966

(Tonnage in Thousands)

Country of Intended Registration	COUNTRY OF CONSTRUCTION														
	Total—All Flags			U.S.S.R.			Soviet Bloc[1] (Excl. U.S.S.R.)			Principal Shipbuilding Nations[2]			All Other		
	No.	Gross Tons	DWT Tons	No.	Gross Tons	DWT Tons	No.	Gross Tons	DWT Tons	No.	Gross Tons	DWT Tons	No.	Gross Tons	DWT Tons
Total—All Flags	*1,999*	*293*	*50,232*	*174*	*51*	*2,423*	*361*	*54*	*2,220*	*1,187*	*184*	*41,097*	*277*	*4*	*4,491*
Freighter	1,042		7,942	94		828	319		1,563	454		3,798	175		1,752
Combination	26	293		9	51		3	54		13	184		1	4	
Bulk	490		18,753	12		432	13		293	413		16,657	52		1,371
Tanker	441		23,537	59		1,163	26		364	307		20,642	49		1,368
U.S.S.R.	*552*	*105*	*4,218*	*147*	*51*	*1,738*	*252*	*54*	*1,326*	*113*		*532*	*40*		*621*
Freighter	403		2,169	83		676	217		824	79		380	24		288
Combination	12	105		9	51		3	54		0	0		0	0	
Bulk	7		158	0		0	7		158	0		0	0		0
Tanker	130		1,891	55		1,062	25		344	34		152	16		333
Soviet Bloc (Excl. U.S.S.R.)[1]	*148*	*15*	*1,564*	*4*		*101*	*101*		*867*	*37*	*15*	*541*	*6*		*55*
Freighter	114		688	0		0	94		712	14		121	6		55
Combination	2	15		0	0		0	0		2	15		0	0	
Bulk	24		480	0		0	6		135	18		345	0		0
Tanker	8		196	4		101	1		20	3		75	0		0

Principal Maritime Nations [2]	*817*	*156*	*28,316*	*23*		*584*	*7*		*15*	*729*	*156*	*26,822*	*58*		*895*
Freighter	356		3,467	11		152	7		15	288		2,638	50		662
Combination	10	156		0	0		0	0		10	156		0	0	
Bulk	271		11,285	12		432	0		0	252		10,656	7		197
Tanker	180		13,564	0		0	0		0	179		13,528	1		36
All Other	*482*	*17*	*16,134*	*0*		*0*	*1*		*12*	*308*	*13*	*13,202*	*173*	*4*	*2,920*
Freighter	169		1,418	0		0	1		12	73		659	95		747
Combination	2	17		0	0		0	0		1	13		1	4	
Bulk	188		6,830	0		0	0		0	143		5,656	45		1,174
Tanker	123		7,886	0		0	0		0	91		6,887	32		999

[1] Bulgaria, Communist China, Czechoslovakia, East Germany, Hungary, Poland, Rumania.

[2] France, West Germany, Greece, Italy, Japan, Netherlands, Norway, Sweden, U.K., U.S.

[3] Denmark, Finland, France, West Germany, Greece, Italy, Japan, Netherlands, Norway, Sweden, U.K.

Source: Maritime Administration, U.S. Department of Commerce; Sudostroyeniye No. 1, January 1966, Moscow.

TABLE 7

International Seaborne Shipping—World Total and Selected Countries—1958–1965
Goods Loaded and Unloaded in Foreign Trade

(In Millions of Metric Tons)

Year	World Tons	Percent	U.S.S.R. Tons	Percent	U.S. Tons	Percent	United Kingdom Tons	Percent	West Germany Tons	Percent	Japan Tons	Percent
1958	1889	100.0	26.6	1.4	278.6	14.8	134.5	7.1	55.0	2.9	58.4	3.1
1959	1987	100.0	34.8	1.8	293.0	14.7	132.6	6.7	62.9	3.2	75.1	3.8
1960	2209	100.0	44.7	2.0	304.3	13.8	161.3	7.3	75.1	3.4	98.7	4.5
1961	2338	100.0	58.5	2.5	297.6	12.7	156.7	6.7	78.4	3.4	133.9	5.7
1962	2533	100.0	67.0	2.6	324.8	12.8	165.2	6.5	82.8	3.3	142.0	5.6
1963	2740	100.0	75.6	2.8	348.4	12.7	176.3	6.4	87.2	3.2	157.3	5.7
1964	3050	100.0	83.7	2.7	381.5	12.5	185.6	6.1	94.3	3.1	194.3	6.4
1965	3285	100.0	91.8	2.8	401.0	12.2	194.6	5.9	100.9	3.1	221.4	6.7

Source: United Nations Statistical Year Book, 1965, United Nations Monthly Bulletin of Statistics, November 1966, and Statistical Office of the United Nations.

TABLE 8

Ship Deliveries From New Construction To the World Fleet, U.S.S.R., United States, and all Other Fleets, 1950, 1956, 1960–1965

(Tonnage in Thousands)

	1950		1956		1960		1961		1962		1963		1964		1965	
	No.	DWT Tons	No.	DWT Tons	No.	DWT Tons	No.	DWT Tons	No.	DWT Tons	No.	DWT Tons	No.	DWT Tons	No.	DWT Tons
World Total	*455*	*4,178*	*742*	*8,525*	*823*	*11,441*	*750*	*10,597*	*758*	*11,493*	*671*	*12,343*	*545*	*13,279*	*650*	*16,495*
Combination	47	277	35	137	25	86	23	104	28	118	19	77	13	42	12	80
Freighter	260	1,591	478	3,794	453	3,554	415	3,231	403	3,335	344	2,790	251	2,031	276	2,311
Bulk	11	69	80	1,002	138	2,041	143	2,461	160	2,902	164	3,719	96	2,240	164	4,972
Tanker	137	2,241	149	3,592	207	5,760	169	4,801	167	5,138	144	5,757	185	8,966	198	9,132
U.S. Total	*4*	*110*	*5*	*144*	*20*	*456*	*24*	*504*	*28*	*512*	*31*	*514*	*15*	*297*	*13*	*246*
Combination	0	0	0	0	0	0	0	0	1	10	3	28	1	9	0	0
Freighter	0	0	0	0	11	100	17	204	24	317	23	290	10	122	11	154
Bulk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tanker	4	110	5	144	9	355	7	300	3	185	5	196	4	166	2	92
U.S.S.R. Total	*7*	*13*	*65*	*353*	*85*	*639*	*58*	*425*	*83*	*699*	*101*	*923*	*82*	*1,100*	*109*	*1,203*
Combination	0	0	0	0	9	16	4	6	3	4	3	4	3	12	1	9
Freighter	6	10	29	114	42	220	26	223	38	324	79	523	58	443	83	607
Bulk	*1	3	22	95	17	115	17	70	21	95	0	0	0	0	0	0
Tanker	0	0	14	144	17	288	11	126	21	276	19	396	21	645	25	587
All Other—Total	*444*	*4,055*	*672*	*8,028*	*718*	*10,346*	*668*	*9,668*	*647*	*10,282*	*539*	*10,906*	*448*	*11,882*	*528*	*15,046*
Combination	47	277	35	137	16	70	19	98	24	104	13	45	9	21	11	71
Freighter	254	1,581	449	3,680	400	3,234	372	2,804	341	2,694	242	1,977	183	1,466	182	1,550
Bulk	10	66	58	907	121	1,926	126	2,391	139	2,807	164	3,719	96	2,240	164	4,972
Tanker	133	2,131	130	3,304	181	5,117	151	4,375	143	4,677	120	5,165	160	8,155	171	8,453

Source: Maritime Administration, U.S. Department of Commerce.

APPENDIX

Classes of Cargo Ships and Tankers Acquired by the USSR During 1959–66[1] With Their Principal Characteristics

Type of Ship Where Built Class	Length Overall[2]	Beam[2]	Draft[2]	Deadweight Tons	Gross Tons	Speed	Type Propulsion	HP/r.p.m.	Remarks
Cargo Ships									
USSR									
Leninsky Komsomol	557	72	32	16,040	12,285	18.5	[4] ST	13,000/100	GT [5] version completed in 1966 [3]
Poltava	510	68	30	12,540	11,090	16.5	[6] D	7,500/115	Large hatch (78')[3]
Perekop	510	68	30	12,690	11,090	16.5	D	8,750/115	Modernized *Poltava* class.
Amguema	437	62	29	8,700	8,180	15.0	[7] DE	7,200/170	Icebreaker/cargo ship.
Vytegrales	400	55	23	6,100	4,700	15.0	D	5,850/170	Timber carrier.[3]
Pavlin Vinogradov	400	53	23	5,740	4,650	14.0	GT	4,000/115	Timber carrier.[3]
Sibir'les	343	47	23	4,230	3,230	14.5	D	2,900/170	Timber carrier.
Malojaroslavec	331	47	23	4,000	3,115	13.5	D	2,900/250	Timber carrier.
Inzhener Belov	394	49	13	4,500	3,400	11.5	D	1,600/300	Cotton/timber carrier.
Poland									
Simferopol (B–43)	508	66	30	12,450	9,345	17.0	D	7,800/119	Large hatch (52').[3]
Murom (B–44)	508	66	30	12,450	9,345	18.0	D	9,000/119	Modernized *Simferopol* class; large hatch (62').
Marceli Nowotko (B–54)	505	64	29	11,360	9,820	16.0	D	7,800/119	[3]
Volgoles (B–514)	406	55	23	5,900	4,500	14.5	D	4,500/125	Timber carrier[3].
Belomorskles (B–45)	406	55	23	5,950	4,670	16.5	D	5,400/135	Modified *Volgoles* class.
Donbass (B–31)	355	48	22	5,020	3,820	12.5	D	2,500/105	Ships built prior to 1959 had steam engines.

East Germany									
Vyborg (Type VI)	494	65	29	12,375	9,000	16.5	D	9,000/130	Large hatch (61′).[3]
Ugleuralsk	439	56	25	7,200	5,630	13.5	D	5,400/115	Coal/ore carrier.
Dshankoi	457	59	26	9,750	7,265	14.5	D	5,400/115	Modified *Ugleuralsk* class.
Andishan	341	47	22	4,230	3,360	14.5	D	2,500/333	
Povenets (Type 201)	341	47	22	4,200	3,750	15.0	D	3,250/185	Timber carrier; modified *Andishan* class.
Hungary									
Keila	258	34	15	1,265	1,250	12.0	D	1,000/315	Coastal cargo type.
Telnovsk	230	33	13	1,100	1,200	9.0	D	800/800	Coastal cargo type.
Rumania									
Novy Donbass	328	46	21	4,200	3,100	14.5	D	2,500/155	
Aleksandr Dovshenko	327	47	19	4,000	2,900	15.0	D	2,500/155	
Denmark									
Beloretsk	526	70	32	14,150	10,650	17.0	D	12,600/110	Large hatch (58′).[3]
Tiksi	517	64	30	12,000	9,500	18.0	D	10,000/115	[3]
Finland									
Krasnograd	483	65	30	12,200	9,250	17.0	D	9,000/119	Large hatch (74′).
Archangelsk	457	58	26	8,500	5,600	16.0	D	6,300/115	
Irkutskles	335	46	19	3,600	2,900	12.5	DE	2,900/170	Timber carrier, 2 variations.
Furmanov	309	46	19	3,050	1,870	13.5	D	2,400/155	
West Germany									
Aragvi	395	53	23	4,500	4,080	18.5	D	7,250/130	Refrigerated fruit carrier.
Japan									
Omsk	507	69	31	12,050	11,100	18.0	D	12,000/115	Large hatch (76′).[3]
Yugoslavia									
Pula	520	69	28	12,000	9,000	18.5	D	12,000/115	Estimated large hatch (60′).[3]

APPENDIX—Classes of Cargo Ships and Tankers (continued)

Type of Ship Where Built Class	Length Overall[2]	Beam[2]	Draft[2]	Deadweight Tons	Gross Tons	Speed	Type Propulsion	HP/r.p.m.	Remarks
Tankers									
USSR									
Sofia	756	102	38	48,220	32,840	17.0	ST	19,000/110	
Pekin	665	85	35	30,460	21,260	18.0	ST	19,000/110	
Kazbek	477	63	28	11,500	8,230	13.0	D	4,000/250	
Oleg Koshevoy	405	53	13	4,170	3,820	10.5	D	1,600/300	Originally built for Caspian Sea service.
Baskunchak	274	39	15	1,575	1,100	13.0	D	2,000/250	
Poland									
Bauska (B–70)	577	78	30	18,700	13,270	15.5	D	7,800/119	
Ogre (B–74)	249	38	14	1,345	1,330	13.0	D	1,500/225	
Bulgaria									
Oleg Koshevoy	405	53	13	4,170	3,820	10.5	D	1,600/300	Originally built for Caspian Sea service.
Finland									
Alagir	345	49	20	4,480	3,300	13.5	D	2,900/170	
Italy									
Leonardo Da Vinci	744	102	38	47,240	31,295	17.5	D	19,000/	
Guiseppi Garibaldi	656	86	34	31,500	20,660	16.0	ST	16,000/	
Japan									
Druzhba	705	96	36	40,000	25,700	16.0	ST	17,500/105	
Mir	702	93	36	39,700	25,000	17.0	ST	17,600/105	
Lugansk	679	89	35	34,650	23,200	17.5	D	18,000/119	
Lozovaya	639	88	25	35,000	23,100	17.0	D	20,700/119	
Kegums	320	49	16	2,650	2,000	13.5	D	2,400/235	

The Netherlands								
Adler	620	77	33	24,700	16,350	15.0	D	9,400/100
Sweden								
Elgava	345	49	20	4,200	3,100	13.0	D	2,900/170
Yugoslavia								
Trud	631	82	32	25,400	17,600	17.0	ST	12,900/115
Split	611	77	32	21,400	15,000	17.0	D	12,000/115

[1] Some of the classes of ships shown in this listing were constructed prior to 1959. For example, the *KAZBEK* class tanker first appeared in 1951 and the *OLEG KOSHEVOY* class tanker was delivered in 1954.

[2] In "feet".

[3] Probably strengthened deck and hatch covers.

[4] ST = steam turbine.

[5] GT = gas turbine

[6] D = diesel.

[7] DE = diesel-electric

Sources: The major characteristics of the principal classes of cargo ships and tankers were obtained from many Soviet and free world technical and shipping publications over the past seven to eight years, viz: Vodnyy Transport, Morskoy Flot, Sudostroyeniye, V. G. Bakayev's two books (EKs Pluatatsiya Morskogo Flota, Moscow, 1965 and Transport SSSR-Morskoy Transport, Moscow, 1961), Fairplay, Shipping World, Lloyd's List and Shipping Gazette, Liverpool Journal of Commerce, Shipbuilding and Shipping Record, Syren and Shipping, Holland Shipbuilding, Motorship, Japan Shipping and Shipbuilding, Shipping and Trade News, Norwegian Shipping News and others.

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